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28863 7590 11/18/2010 SHUMAKER & SIEFFERT, P. A. 1625 RADIO DRIVE SUITE 300 WOODBURY, MN 55125				
EXAMINER SIEFKE, SAMUEL P				
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RICHARD J. MEHUS, CHARLES A. HODGE and  
QUANG VAN DAO

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Appeal 2009-015071  
Application 10/602,384  
Technology Center 1700

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Before TERRY J. OWENS, JEFFREY T. SMITH, and  
KAREN M. HASTINGS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>  
STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-7, 18-22 and 24. Claims 14-17, which are all of the

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

other pending claims, stand withdrawn from consideration by the Examiner.  
We have jurisdiction under 35 U.S.C. § 6(b).

*The Invention*

The Appellants claim a concentration monitor. Claim 1 is illustrative:

1. A concentration monitor comprising:
  - a resistivity probe that measures resistivity of selected one of a plurality of use solutions;
  - a temperature sensor that measures a temperature of the selected use solution;
  - a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications; and
  - a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and one of the plurality of the predetermined algorithms associated with a product classification of the product in the selected use solution.

*The Reference*

Nomura

6,706,533

Mar. 16, 2004

*The Rejection*

Claims 1-7, 18-22 and 24 stand rejected under 35 U.S.C. § 103 over  
Nomura.

**OPINION**

We reverse the rejection.

*Issue*

Have the Appellants indicated reversible error in the Examiner's determination that Nomura would have rendered prima facie obvious, to one of ordinary skill in the art, a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that is programmed to calculate a

concentration of a product based in part upon one of the plurality of predetermined algorithms?

*Findings of Fact*

Nomura discloses a concentration detector which, based upon the measured electrical conductivity and temperature of a solution, calculates the concentration of an agent in the solution from an equation including constants determined by measuring the electrical conductivities and temperatures of a plurality of solutions containing the same agent (col. 3, l. 65 – col. 4, l. 35).

*Analysis*

The Appellants argue that Nomura merely determines a set of constants for each agent to be measured and does not teach or suggest a memory which stores a plurality of predetermined algorithms associated with a different one of a plurality of product classifications or a controller that determines the concentration of an agent based upon one of the plurality of predetermined algorithms (Br. 6; Reply Br. 4-5).

The Examiner argues (Ans. 5-6):

It is considered predictable that the memory of the disclosed computer controller could store a plurality of different predetermined algorithms associated with different product agents. It would have been within the ambit of a person of ordinary skill in the art to store a plurality of different algorithms for different product agents within a memory feature of the disclosed apparatus to facilitate effective product monitoring for each of the product agents. The simple substitution of one known element, such as a predetermined algorithm in this instance, for another is likely to be obvious when predictable results are achieved. See *KSR Int'l v. Teleflex Inc.*, 127 Sup. Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate a memory feature storing a plurality of different predetermined

algorithms associated with different product agents or classifications in order to effectively use the disclosed monitoring apparatus in monitoring different product agents.

The Examiner's argument that the substitution of the Appellants' plurality of predetermined algorithms for Nomura's algorithm is a simple substitution of one known element for another is not persuasive because the Examiner has not established that the Appellants' plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, was known in the art.

The Examiner's argument that it is predictable that Nomura's computer memory could store the Appellants' plurality of predetermined algorithms is not well taken because, as stated by the Court of Custom and Patent Appeals in *In re Prater*, 415 F.2d 1393, 1403 n.29 (CCPA 1969):

In one sense, a general-purpose digital computer may be regarded as but a storeroom of parts and/or electrical components. But once a program has been introduced, the general-purpose digital computer becomes a special-purpose digital computer (i.e., a specific electrical circuit with or without electro-mechanical components) which, along with the process by which it operates, may be patented subject, of course, to the requirements of novelty, utility, and non-obviousness.

Thus, the question is not whether Nomura's memory could store the Appellants' plurality of predetermined algorithms but, rather, is whether Nomura would have rendered *prima facie* obvious to one of ordinary skill in the art, through no more than ordinary creativity, the Appellants' memory which stores the Appellants' plurality of predetermined algorithms and the Appellants' controller which is programmed to calculate the concentration of a product based in part upon the one of the plurality of predetermined

algorithms. *See KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (In making an obviousness determination one “can take account of the inferences and creative steps that a person of ordinary skill in the art would employ”). The Examiner has not provided evidence or reasoning which shows that Nomura would have rendered such a memory and controller *prima facie* obvious to one of ordinary skill in the art.

*Conclusion of Law*

The Appellants have indicated reversible error in the Examiner’s determination that Nomura would have rendered *prima facie* obvious, to one of ordinary skill in the art, a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that is programmed to calculate a concentration of a product based in part upon one of the plurality of predetermined algorithms.

DECISION/ORDER

The rejection of claims 1-7, 18-22 and 24 under 35 U.S.C. § 103 over Nomura is reversed.

It is ordered that the Examiner’s decision is reversed.

REVERSED

tc  
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